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EXAMINER
CHANG, RICK KILTAE

ART UNIT	PAPER NUMBER
3729	

DATE MAILED: 11/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,774

Applicant(s)

REIJNDERS, HARRY J. M.

Examiner

Rick K. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/25/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9, 11 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11, 14-20, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 8/25/03. These drawings are disapproved because the process shown in Fig. 11 is new matter. Fig. 5 is approved.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5, 7-9, 11, 14-20, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure, as originally filed, fails to provide support for "printed circuit board(s)".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 7, 11, 14-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 5,419,038) in view of Latasiewicz (US 4,316,235).

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Wang discloses common circuit board (14, 24-1, 26-1 and 30) with a plurality of circuit patterns of a first substrate and a second substrate (Fig. 7), separating the common circuit board (channel formed) after the connecting step, and titling step (Fig. 10).

Wang fails to disclose circuit board that is printed; fastening at least one electrically conductive pre-formed wire; scoring the circuit board; holding the separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member.

Latasiewicz discloses circuit board that is printed; fastening at least one electrically conductive pre-formed wire (30); scoring the common substrate; holding the separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member (Figs. 1-3) thereby forming a display monitor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang by providing circuit board that is printed; fastening at least one electrically conductive pre-formed wire; scoring the common substrate; holding the separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member, as taught by Latasiewicz, for the purpose of forming a display monitor using printed circuits.

Re claim 18: Wang fails to disclose forming a groove at an angle less than 60 degrees.

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At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to form a groove at an angle less than 60 degrees because Applicant has not disclosed that forming a groove at an angle less than 60 degrees provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with forming a groove at an angle 90 degrees because it would perform the same function of easily severing the boards from each other.

Therefore, it would have been an obvious matter of design choice to modify Wang to obtain the invention as specified in claim 18.

1. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 5,419,038)/Latasiewicz (US 4,316,235) as applied to claim 1 above, and further in view of Degani et al (US 6,370,766).

Wang/Latasiewicz fail to disclose testing prior to separating.

Degani discloses testing prior to separating (burn-in testing) thereby insuring that the printed circuit is properly functioning under stress.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by testing by making at least one connection that is external, as taught by Degani, for the purpose of insuring that the printed circuit is properly functioning under stress.

2. Claims 8-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 5,419,038)/Latasiewicz (US 4,316,235) as applied to claim 1 above, and further in view of Official Notice.

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Wang/Latasiewicz fails to disclose pressing or cutting by using an edged tool.

Official Notice is taken that it is well known in the art to press or cut by using an edged tool, such as a router, to cleanly separate a plurality of circuit boards from each other.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by pressing or cutting by using an edged tool, as taught by Official Notice, for the purpose of cleanly separating a plurality of circuit boards from each other.

3. Claims 17 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 5,419,038)/Latasiewicz (US 4,316,235) as applied to claims 1, 3 and 15 above, and further in view of Feeney (US 3,780,430).

Wang/Latasiewicz fail to disclose housing a circuit board against a sidewall, inserting process and a soldering process.

Feeney discloses housing a circuit board against a sidewall (Fig. 1), inserting process (58 is inserted in a throughhole formed in 14) and a soldering process (56) thereby protecting the board against the environment and mechanically and electrically fastening wires.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by housing a circuit board against a sidewall, inserting process and a soldering process, as taught by Feeney, for the purpose of protecting the board against the environment and mechanically and electrically fastening wires.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 5,419,038)/Latasiewicz (US 4,316,235) as applied to claims 1 and 3 above, and further in view of Degani et al (US 6,370,766).

Wang/Latasiewicz fail to disclose making at least one connection that is external.

Degani discloses making at least one connection that is external (burn-in testing) thereby insuring that the printed circuit is properly functioning under stress.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by testing by making at least one connection that is external, as taught by Degani, for the purpose of insuring that the printed circuit is properly functioning under stress.

Response to Arguments

5. Applicant's arguments filed 8/25/03 have been fully considered but they are not persuasive.

Applicant's disclosure fails to provide support for "printed circuit board(s)". It is confusing that the applicant is using the terms "printed circuit board(s)" in instance and in another instance using the terms "printed wiring board(s)".

Wang discloses common circuit board (14, 24-1, 26-1 and 30) with a plurality of circuit patterns of a first substrate and a second substrate (Fig. 7), separating the common circuit board (channel formed) after the connecting step, and titling step (Fig. 10). Wang fails to disclose circuit board that is printed; fastening at least one electrically conductive pre-formed wire; scoring the circuit board; holding the separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member. Latasiewicz discloses circuit board that is printed; fastening at least one electrically conductive pre-formed wire (30); scoring the common substrate; holding the

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separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member (Figs. 1-3) thereby forming a display monitor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang by providing circuit board that is printed; fastening at least one electrically conductive pre-formed wire; scoring the common substrate; holding the separated substrates in fixed position; connecting a pre-insulated wire; using a holding fixture; holding one of the separated substrates in proximity to one frame member and another one of the separated substrates held in proximity to a second frame member, as taught by Latasiewicz, for the purpose of forming a display monitor using printed circuits.

Wang/Latasiewicz fail to disclose testing prior to separating. Degani discloses testing prior to separating (burn-in testing) thereby insuring that the printed circuit is properly functioning under stress. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by testing by making at least one connection that is external, as taught by Degani, for the purpose of insuring that the printed circuit is properly functioning under stress.

Wang/Latasiewicz fails to disclose pressing or cutting by using an edged tool. Official Notice is taken that it is well known in the art to press or cut by using an edged tool, such as a router, to cleanly separate a plurality of circuit boards from each other. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by pressing or cutting by using an edged tool, as taught by Official Notice, for the purpose of cleanly separating a plurality of circuit boards from each other.

Wang/Latasiewicz fail to disclose housing a circuit board against a sidewall, inserting process and a soldering process. Feeney discloses housing a circuit board against a sidewall (Fig. 1), inserting process (58 is inserted in a throughhole formed in 14) and a soldering process (56) thereby protecting the board against the environment and mechanically and electrically fastening wires. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by housing a circuit board against a sidewall, inserting process and a soldering process, as taught by Feeney, for the purpose of protecting the board against the environment and mechanically and electrically fastening wires.

Wang/Latasiewicz fail to disclose making at least one connection that is external. Degani discloses making at least one connection that is external (burn-in testing) thereby insuring that the printed circuit is properly functioning under stress. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang/Latasiewicz by testing by making at least one connection that is external, as taught by Degani, for the purpose of insuring that the printed circuit is properly functioning under stress.

Interviews After Final

6. **Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.**

Conclusion

7. **Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity. Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.**


8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (703) 308-4784. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

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The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.



RICHARD CHANG
PRIMARY EXAMINER

RC
November 4, 2003